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MORBIDITY AND MORTALITY WEEKLY REPORT

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Influenza B Virus Outbreak on a Cruise Ship — Northern Europe, 2000

During June 23–July 5, 2000, an outbreak of respiratory illnesses occurred on the MS Rotterdam (Holland America Line & Windstar Cruises) during a 12-day Baltic cruise from the United Kingdom to Germany via Russia. The ship carried 1311 passengers, primarily from the United States, and 506 crew members from many countries. Although results of rapid viral testing for influenza A and B viruses were negative, immunofluorescence staining and viral culture results implicated influenza B virus infection as the cause of the outbreak. This report summarizes the findings of the outbreak investigation conducted by the ship's medical department and describes the measures taken to control the outbreak. Travelers at high risk for complications of influenza who were not vaccinated with influenza vaccine during the preceding fall or winter should consider receiving influenza vaccine before travel with large tourist groups at any time of year or to certain regions of the world.

On June 26, nine crew members presented to the ship's infirmary with cough, sore throat, and fever ≥ 100.0 F (≥ 37.8 C). All had developed symptoms during the preceding 24 hours. Oropharyngeal specimens from two crew members were tested by a commercial rapid influenza diagnostic test designed to detect both influenza A and B viruses but not to distinguish between them. Although test results were negative, three crew members with high fevers were started on rimantadine therapy for clinically suspected influenza A infection.

To characterize and control the suspected outbreak among crew members, ship's medical staff implemented a respiratory illness protocol that included surveillance for cases of respiratory illness. A case of acute respiratory illness (ARI) was defined as cough or sore throat. Influenza-like illness (ILI), a subset of ARI cases, was defined as ARI with fever ≥ 100.0 F (≥ 37.8 C) or self-reported feverishness. Active surveillance was initiated among crew members. Supervisors on each work shift observed and asked crew members about symptoms of influenza and required any crew member with symptoms to report to the ship's infirmary for evaluation. Crew members with confirmed ILI were relieved of duty and placed in cabin isolation either alone or with other ill crew members. Passive surveillance was initiated among passengers and identified any passenger who presented to the ship's infirmary with respiratory illness. A commercial rapid influenza diagnostic test, designed to detect both influenza A and B viruses but not to distinguish between them, was used selectively to assist in diagnosis. Medical and demographic information, including country of residence, cabin number, and crew duties (if applicable), was collected from ill patients.

Influenza B Virus — Continued

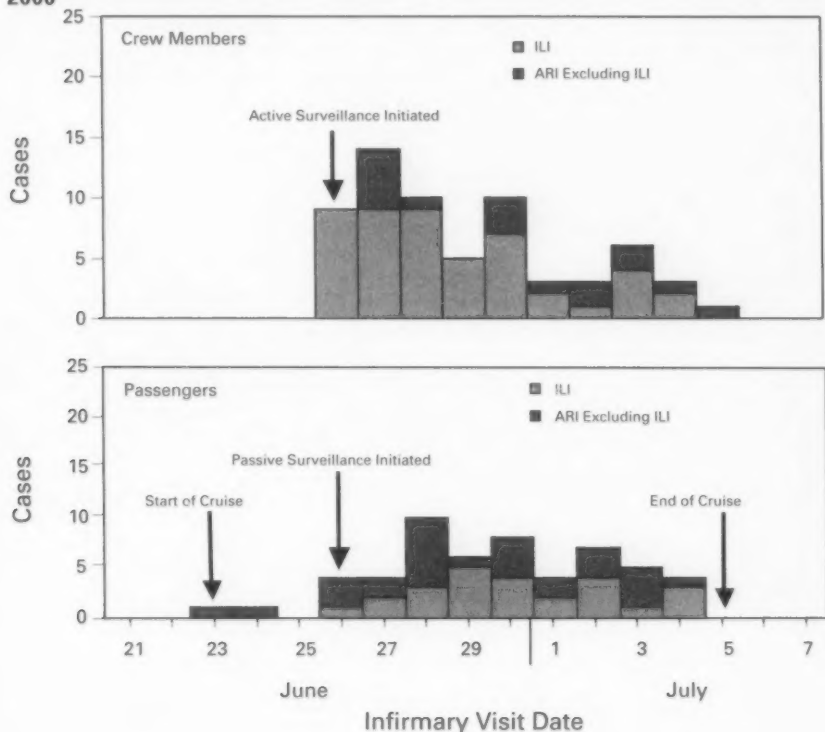
By June 29, 38 crew members and 26 passengers had been seen in the infirmary for ARI; of these, 32 (84%) crew members and 11 (42%) passengers had ILI. Eight crew members were tested by rapid influenza diagnostic testing; all had negative results. Because the etiology of crew respiratory illnesses remained uncertain, four symptomatic crew members disembarked in Stockholm, Sweden, for medical evaluation that included testing of nasopharyngeal specimens by immunofluorescence staining and viral culture. Two of four nasopharyngeal specimens tested positive for influenza B virus by immunofluorescence staining; one of the two specimens also was positive by culture. Neither of the two crew members diagnosed with influenza B virus infection had been tested using the rapid influenza diagnostic test. On the basis of immunofluorescence results, crew members on rimantadine therapy, which is effective only against influenza A infection, were advised to discontinue their medication. Oseltamivir, an antiviral agent that is effective against both influenza A and B infection, was sent to the ship for treatment of ill crew members and passengers.

A total of 64 (13%) crew members and 54 (4%) passengers were identified with ARI during the cruise. Of 63 crew members and 54 passengers with ARI for whom clinical information was known, 45 (71%) and 25 (46%), respectively, also had ILI (Figure 1). The median age of ill crew members was 32 years (range: 21–56 years) and of passengers, 68 years (range: 7–85 years). By cross-referencing crew duties, cabin locations of ill crew members and passengers, and dates of illness, medical staff identified the potential index case-patient as a 78-year-old U.S. passenger who boarded the ship ill with unconfirmed ILI after visiting London. She remained in her cabin except for occasional meals and did not seek medical attention until the fifth day of the cruise (June 28). Two of the 13 crew members with ILI, who were seen in the infirmary on June 25 and 26, were her cabin and dining room stewards. Both had worked, socialized, or shared cabins with other crew members who became ill. Surveillance among passengers and crew members was continued during the subsequent cruise and showed a decrease in the number of ARI and ILI cases.

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Editorial Note: The findings of this investigation implicated influenza B virus as the cause of a respiratory illness outbreak onboard a cruise ship. Although the results of rapid viral testing for influenza A and B viruses were negative, influenza B infection was confirmed by viral culture and immunofluorescence antibody testing in two crew members. Although these tests were not performed on passengers, epidemiologic evidence suggested that respiratory illness cases among crew members and passengers were related and that an ill passenger might have transmitted infection to crew members.

Rapid viral diagnostic testing for influenza can be useful for patient management and influenza outbreak control. However, these tests are not as accurate in detecting influenza infection as viral culture (1). If an influenza outbreak is suspected, nasopharyngeal specimens should be collected simultaneously for rapid viral tests and viral isolation. Viral isolation is essential for identifying new or unusual strains of influenza and for selecting influenza vaccine strains.

*Influenza B Virus — Continued***FIGURE 1. Acute respiratory illness (ARI) and influenza-like illness (ILI) among crew members and passengers, by infirmary visit date — MS Rotterdam, June 23–July 5, 2000**

Influenza A outbreaks have been reported on cruise ships sailing in the Northern Hemisphere during the summer, but influenza B outbreaks have not been documented (2–7). Early suspicion of a potential influenza outbreak among crew members and rapid implementation of a respiratory illness control protocol probably limited the size of the outbreak. Key elements of the protocol included 1) implementation of active and passive surveillance using standard case definitions; 2) use of targeted rapid influenza diagnostic testing and viral cultures to confirm cases of influenza virus infection; 3) isolation of all crew members meeting the ILI case definition or those with confirmed influenza; 4) use of antiviral agents for treatment and, if indicated, for prophylaxis; and 5) monitoring of intervention results (8).

Influenza B Virus — Continued

Because influenza viruses usually are spread by droplets and aerosols produced by an infected person who is coughing or sneezing, isolation can limit the spread of infection in semienclosed environments such as cruise ships (2). Although the number of days crew members with ILI were isolated from noninfected crew members and passengers was not reported, isolation measures ideally should have covered the first 5 days of illness, a period based on the duration of influenza virus shedding in adults (8).

Summertime influenza outbreaks among passengers and crew members on cruise ships suggest that traveling in large groups can pose a risk for exposure to influenza viruses, even when the group is traveling in regions where influenza is not in seasonal circulation. Both passengers and crew members can serve as potential reservoirs of influenza infection. Travelers at high risk for complications of influenza (e.g., persons aged ≥ 50 years, immunocompromised persons, and persons with chronic disorders of the pulmonary or cardiovascular systems) who were not vaccinated with influenza vaccine during the preceding fall or winter should consider receiving influenza vaccine before travel 1) with large organized tourist groups at any time of year; 2) to the tropics; or 3) to the Southern Hemisphere from April through September (the time of increased influenza activity in that hemisphere) (9). Cruise lines should attempt to achieve at least an 80% vaccination rate among crew members on each ship each year (8).

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Blood and Hair Mercury Levels in Young Children and Women of Childbearing Age — United States, 1999

Mercury (Hg), a heavy metal, is widespread and persistent in the environment. Exposure to hazardous Hg levels can cause permanent neurologic and kidney impairment (1–3). Elemental or inorganic Hg released into the air or water becomes methylated in the environment where it accumulates in animal tissues and increases in concentration

Blood and Hair Mercury Levels — Continued

through the food chain. The U.S. population primarily is exposed to methylmercury by eating fish. Methylmercury exposures to women of childbearing age are of great concern because a fetus is highly susceptible to adverse effects. This report presents preliminary estimates of blood and hair Hg levels from the 1999 National Health and Nutrition Examination Survey (NHANES 1999) and compares them with a recent toxicologic review by the National Research Council (NRC). The findings suggest that Hg levels in young children and women of childbearing age generally are below those considered hazardous. These preliminary estimates show that approximately 10% of women have Hg levels within one tenth of potentially hazardous levels indicating a narrow margin of safety for some women and supporting efforts to reduce methylmercury exposure.

CDC's NHANES is a continuous survey of the health and nutritional status of the U.S. civilian, noninstitutionalized population with each year of data constituting a representative population sample. A household interview and a physical examination were conducted for each survey participant. During the physical examination, blood was collected by venipuncture for all persons aged ≥ 1 year and hair samples, consisting of approximately 100 strands, were cut from the occipital position of the head of children aged 1–5 years and women aged 16–49 years. Whole blood specimens were analyzed for total Hg and inorganic Hg for children aged 1–5 years and women aged 16–49 years by automated cold vapor atomic absorption spectrophotometry in CDC's trace elements laboratory. The detection limit was 0.2 parts per billion (ppb) for total Hg and 0.4 ppb for inorganic Hg (4). Hairs of 0.6 inches (1.5 cm) closest to the scalp (approximately 1 month's growth) were analyzed for total Hg concentration using cold vapor atomic fluorescence spectroscopy (5). The limit of detection for total Hg in hair varied by analytic batch; the maximum limit of detection (0.1 parts per million [ppm]) was used in these analyses. Blood Hg levels less than the limit of detection were assigned a value equal to the detection limit divided by the square root of two for calculation of geometric mean values.

The geometric mean total blood Hg concentration for all women aged 16–49 years and children aged 1–5 years was 1.2 ppb and 0.3 ppb, respectively; the 90th percentile of blood Hg for women and children was 6.2 ppb and 1.4 ppb, respectively (Table 1). Almost all inorganic Hg levels were undetectable; therefore, these measures indicate blood

TABLE 1. Selected percentiles and geometric means of blood and hair mercury (Hg) concentrations for children aged 1–5 years and women aged 16–49 years — National Health and Nutrition Examination Survey, United States, 1999

		Geometric		Selected percentiles (95% CI)*				
		No.	mean (95% CI)	10th	25th	50th	75th	90th
Blood Hg[†]								
Children	248	0.3	(0.2–0.4)	<LOD [‡]	<LOD	0.2 (0.2–0.3)	0.5 (0.4–0.8)	1.4 (0.7–4.8)
Women	679	1.2	(0.9–1.6)	0.2 (0.1–0.3)	0.5 (0.4–0.7)	1.2 (0.8–1.6)	2.7 (1.8–4.5)	6.2 (4.7–7.9)
Hair Hg[‡]								
Children	338	—**		<LOD	<LOD	<LOD	0.2 (0.1–0.4)	0.4 (0.3–1.8)
Women	702	—		<LOD	<LOD	0.2 (0.2–0.3)	0.5 (0.4–0.8)	1.4 (0.9–1.7)

* Confidence interval.

[†] Parts per billion.

[‡] Limit of detection.

[§] Parts per million.

** Not calculated. Proportion <LOD too high to be valid.

Blood and Hair Mercury Levels — Continued

methylmercury levels. The 90th percentile of hair Hg for women and children was 1.4 ppm and 0.4 ppm, respectively. Geometric mean values were not calculated for hair Hg values.

Reported by: Center for Food Safety and Applied Nutrition, Food and Drug Administration. US Environmental Protection Agency. National Energy Technology Laboratory, Dept of Energy. National Marine Fisheries Laboratory, National Oceanic and Atmospheric Administration. National Center for Health Statistics; National Center for Environmental Health, CDC.

Editorial Note: The NHANES 1999 blood and hair Hg data are the first nationally representative human tissue measures of the U.S. population's exposure to Hg. Previous estimates of methylmercury exposure in the general population were based on exposure models using fish tissue Hg concentrations and dietary recall survey data (1). The NRC review provided guidance to the Environmental Protection Agency (EPA) for developing an exposure reference dose for methylmercury (i.e., an estimated daily exposure that probably is free of risk for adverse effects over the course of a person's life) (3). The NRC report recommended statistical modeling of results from an epidemiologic study conducted in the Faroe Islands near Iceland, where methylmercury exposures are high because of the large amount of seafood eaten by the local population. Results of this study were used to calculate a benchmark dose (BMD), an estimate of a methylmercury exposure in utero associated with an increase in the prevalence of abnormal scores on cognitive function tests in children. The lower 95% confidence limit of the BMD (BMDL*) was recommended to calculate the EPA reference dose. The NRC committee recommended a BMDL of 58 ppb Hg in cord blood (corresponding to 12 ppm Hg in maternal hair) (3). In the NHANES 1999 sample, there were no measurements of blood values ≥ 58 ppb or hair values ≥ 12 ppm. A margin-of-exposure analysis (i.e., an evaluation of the ratio of BMDL to estimated population exposure levels) showed ratios of <10 when comparing BMDL with NHANES 1999 estimates of the 90th percentile for blood and hair Hg levels in women of childbearing age. Margin-of-exposure measures of this magnitude indicate a narrow margin of safety (3) and suggest that efforts aimed at decreasing human exposure to methylmercury should continue.

The findings in this study are subject to at least three limitations. First, the ratio of Hg in cord and maternal blood is uncertain. The NRC committee summarized some studies that suggest that cord blood values may be 20%–30% higher than corresponding maternal blood levels. However, other studies suggest that the ratio is closer to 1:1 (3); therefore, the NHANES values may not be directly comparable to BMDL recommended by NRC. Second, NHANES cannot provide estimates of Hg exposure in certain highly exposed groups (e.g., subsistence fishermen and others who eat large amounts of fish). Published data from studies of highly exposed U.S. populations indicated that some persons attain Hg tissue levels above BMDL (1). Third, the sample size of NHANES 1999 was small and the 1999 survey was conducted in only 12 locations. More data are needed to confirm these findings.

*A BMD of 85 ppb Hg in cord blood or 17 ppm Hg in maternal hair was estimated to result in an increase in the proportion of abnormal scores on the Boston Naming Test for children exposed in utero from an estimated background prevalence of 5% to a prevalence of 10% (6). BMDL recommended by NRC is the lower 95% confidence bound of the BMD.

Blood and Hair Mercury Levels — Continued

The long-term strategy for reducing exposure to Hg is to lower concentrations of Hg in fish by limiting Hg releases into the atmosphere from burning mercury-containing fuel and waste and from other industrial processes. On the basis of data from EPA's National Toxics Inventory, air emissions of Hg decreased approximately 21% during 1990–1996, largely because of regulations for waste incineration (7). EPA expects this trend to continue as regulations are implemented for waste incineration and chlorine production facilities and are developed for electric power utilities (8,9). Fish is high in protein and nutrients and low in saturated fatty acids and cholesterol and should be considered an important part of the diet. The short-term strategy to reduce Hg exposure is to eat fish with low Hg levels and to avoid or to moderate intake of fish with high Hg levels. State-based fish advisories and bans identify fish species contaminated by Hg and their locations and provide safety advice (<http://www.epa.gov/ost/fish/>). The Food and Drug Administration advises that pregnant women and those who may become pregnant should not eat shark, swordfish, king mackerel, and tile fish known to contain elevated levels of methylmercury. Information is available at <http://www.fda.gov/bbs/topics/ANSWERS/2001/advisory.html>¹.

U.S. population estimates of Hg tissue levels by race/ethnicity, region, and fish consumption will become available after 2 additional years of NHANES data collection. NHANES will provide the opportunity to measure tissue Hg levels and to monitor the effectiveness of continuing efforts to reduce methylmercury exposure in the U.S. population.

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¹ References to sites of non-CDC organizations on the World-Wide Web are provided as a service to *MMWR* readers and do not constitute or imply endorsement of these organizations or their programs by CDC or the U.S. Department of Health and Human Services. CDC is not responsible for the content of pages found at these sites.

Progress Toward Poliomyelitis Eradication — Afghanistan, 1999–2000

In 1988, the World Health Assembly of the World Health Organization (WHO) resolved to eradicate poliomyelitis globally by 2000. During the same year, the Eastern Mediterranean Region* (EMR) of WHO passed a resolution to join the global initiative. Since then, substantial progress has been made worldwide and in EMR member countries (1,2). Afghanistan, with ongoing civil conflict, initiated polio eradication activities in 1994. Since then, a countrywide surveillance system for acute flaccid paralysis (AFP) was established and National Immunization Days (NIDs)[†] were implemented (3). This report summarizes the achievements toward polio eradication in Afghanistan during 1999–2000.

Routine Vaccination

In 1996, an estimated 30% of infants aged <1 year had received three doses of oral poliovirus vaccine (OPV) (3). In 1998, a review of the Expanded Program on Immunization (EPI) documented wide variations in vaccination coverage by geographic area; levels were particularly low in the north as a result of civil conflict. In 1999, EPI acceleration campaigns provided vaccinations to 82,000 unvaccinated children aged <2 years. In 2000, a comprehensive 5-year plan was drafted to set targets and strategies for the coming years.

Supplemental OPV Vaccination

During 1994–1996, supplemental vaccination activities against polio began with multivaccine subnational campaigns that delivered diphtheria and tetanus toxoids and pertussis vaccine, OPV, and measles vaccine to children aged <5 years. NIDs using OPV were initiated during April–May 1997, and since have been conducted annually. High coverage was achieved during four NID rounds in 1999 and another four in 2000 (Table 1). Of 330 districts in Afghanistan, 325 were reached during the fall 1999 NIDs. During the spring 2000 NIDs, all districts were reached except two north of the capital (Kabul) where most of the population had left the area because of ongoing civil conflict. Supplemental vaccination activities in Afghanistan have been coordinated with neighboring countries, particularly Iran and Pakistan. Because surveillance data indicate that Afghanistan and Pakistan are one epidemiologic block, supplemental campaigns have been conducted simultaneously in both countries when possible. Since the fall of 1999, careful district level NID planning and well-supervised house-to-house vaccination have led to incremental improvements in the quality and coverage of each NID.

AFP Surveillance

In 1997, 37 AFP sentinel reporting sites were established. Since then, surveillance has expanded to 234 sites with emphasis on areas with high population density. In 2000, Afghanistan exceeded the WHO established target for a nonpolio AFP rate indicative of sensitive surveillance (i.e., ≥ 1.0 per 100,000 population aged <15 years) with a rate of 1.2 (Table 1). During 1999–2000, the number of AFP cases increased from 230 to 253, and the number of wild polioviruses isolated from AFP cases decreased from 63 to 28 (Figure 1). The

*Djibouti, Egypt, Libya, Morocco, Somalia, Sudan, and Tunisia in northern and eastern Africa; Bahrain, Kuwait, Oman, Qatar, Saudi Arabia, United Arab Emirates, and Yemen in the Arabian peninsula; Iraq, Jordan, Lebanon, Syria, and the Palestinian National Authority in the Middle East; Afghanistan, Iran, and Pakistan in Asia; and Cyprus.

[†]Mass campaigns over a short period (days to weeks) in which two doses of OPV are administered to all children in the target group (usually aged 0–4 years), regardless of vaccination history, with an interval of 4–6 weeks between doses.

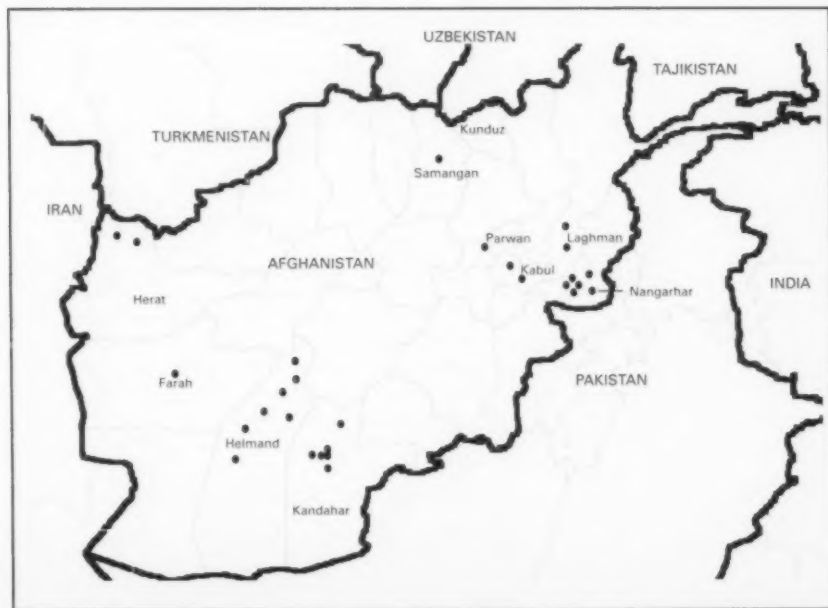
*Poliomyelitis Eradication — Continued***TABLE 1. Acute flaccid paralysis (AFP) surveillance and National Immunization Day (NID)* coverage — Afghanistan, 1999 and 2000**

Surveillance indicators	NID round	1999	2000
AFP cases		230	253
Nonpolio AFP rate [†]		0.66	1.22
Confirmed poliomyelitis cases		150	103
Confirmed wild poliovirus cases		63	28
Percentage of persons with AFP with adequate stool samples [‡]		53%	50%
No. children vaccinated	1	4,026,094	5,155,049
	2	4,293,368	5,250,648
	3	4,610,861	5,704,009
	4	4,220,681	5,761,400

* Mass campaigns over a short period (days to weeks) in which two doses of oral poliovirus vaccine are administered to all children in the target group (usually aged 0–4 years), regardless of vaccination history, with an interval of 4–6 weeks between doses.

[†] Number of nonpolio AFP case-patients per 100,000 population aged <15 years.

[‡] Two stool specimens, collected 24 to 48 hours apart within 14 days of onset of paralysis, that arrive in the laboratory in good condition.

FIGURE 1. Location of poliomyelitis cases* confirmed through wild poliovirus isolation — Afghanistan, 2000[†]

* n=28.

[†] As of February 26, 2001.

Poliomyelitis Eradication — Continued

National Institute of Health (NIH), Islamabad, Pakistan, has provided laboratory support for the Afghanistan program. All stool specimens are flown from Afghanistan to Islamabad on United Nations' flights and transported to the NIH laboratory.

A remaining challenge is the timely collection of adequate stool specimens¹ from AFP case-patients. In 2000, 50% of AFP cases reported nationally had adequate stool specimens, which was substantially short of the WHO target of 80%. This low level is partly the result of AFP being identified late in patients' illness, which precludes the collection of stool specimens soon after paralysis onset. Intensified efforts are being made to improve surveillance quality by the immediate investigation of all AFP cases and weekly active surveillance visits to major hospitals and shrines.

Reported by: Afghanistan Country Office, World Health Organization, Islamabad, Pakistan. Eastern Mediterranean Regional Office, World Health Organization, Cairo, Egypt. Vaccines and Biologicals Dept, World Health Organization, Geneva, Switzerland. Respiratory and Enteric Viruses Br, Div of Viral and Rickettsial Diseases, National Center for Infectious Diseases; Vaccine Preventable Disease Eradication Div, National Immunization Program, CDC.

Editorial Note: Although polio remains endemic in Afghanistan, progress during 1999–2000 demonstrates that key strategies can be implemented successfully in countries experiencing internal strife. During 1999–2000, the nonpolio AFP rate almost doubled and the number of districts reached by NIDs increased steadily. Careful planning and supervision of house-to-house vaccination and support from an increasing number of local partners resulted in the largest number of children ever being reached. Monitoring by nongovernment organizations, United Nations' agencies, and local authorities has increased the quality of NIDs. During the spring 2000, the days of tranquility were respected by all warring factions and their local commanders, greatly facilitating the implementation of NIDs.

Civil conflict, massive population shifts (returning refugees and traditional nomadic movements), a drought, rebuilding the public health infrastructure, geographic barriers, extreme climate, and the need to access areas that can be reached only by several days' travel on muleback are some of the obstacles facing eradication efforts in Afghanistan. Until 2000, negotiated cease-fires and days of tranquility agreements during NIDs had been only partly successful. Cessation of polio vaccination activities in mid-1997 in northern Afghanistan as a result of ongoing conflict may have facilitated the large polio outbreak that occurred in Kunduz province in 1999 (4).

Innovative measures and local peace initiatives will continue to be needed to create opportunities for reaching and vaccinating isolated populations. Afghanistan is preparing the implementation of five NID rounds in 2001. Plans are being developed to conduct focal mass campaigns in large, high-risk areas during the summer of 2001. Improved and timely stool specimen collection from AFP case-patients will be necessary to obtain data for targeting these campaigns and eliminating the last reservoirs of poliovirus circulation. Meeting these challenges will require the continued support of polio eradication partners².

¹ Two stool specimens collected 24 to 48 hours apart within 14 days of onset of paralysis that arrive in the laboratory in good condition.

² Polio eradication in Afghanistan is supported by the national government. External support is provided by global polio eradication partners, including Rotary International, United Nations Children's Fund (UNICEF), WHO, the governments of the United States, Great Britain, Denmark, Norway, Netherlands, Sweden, Luxemburg, Germany, and the European Community.

*Poliomyelitis Eradication — Continued**References*

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*Public Health Dispatch***Outbreak of Poliomyelitis — Dominican Republic and Haiti, 2000–2001**

During July 12, 2000–February 8, 2001, 12 laboratory-confirmed poliomyelitis cases attributed to vaccine-derived poliovirus type 1 were identified in the Dominican Republic (1). Of these, 11 (92%) case-patients were aged ≤ 6 years (range: 9 months–14 years), and the date of paralysis onset of the last case was January 2, 2001. All case-patients were inadequately vaccinated or unvaccinated. In Haiti, one confirmed polio case attributed to vaccine-derived type 1 poliovirus was reported in an unvaccinated child aged 2 years with paralysis onset on August 30, 2000. As of February 21, 33 acute flaccid paralysis (AFP) cases from the Dominican Republic and three AFP cases from Haiti were pending final classification.

Extensive control efforts are under way. The Dominican Republic held nationwide mass vaccination campaigns with oral poliovirus vaccine (OPV) in December 2000 and February 2001, with a third round planned for April 2001. All children aged < 5 years are being targeted, with approximately 1.2 million OPV doses given in the first campaign. AFP surveillance has been strengthened with intensification of active case-finding and weekly reporting. Haiti has initiated regional OPV campaigns to be conducted approximately every 2 months.

Travelers to the Dominican Republic and Haiti who are not vaccinated adequately are at risk for polio. All travelers should be vaccinated against polio according to national vaccination policies (2)*.

Reported by: Ministry of Health, Pan American Health Organization, Santo Domingo, Dominican Republic. Ministry of Health, Pan American Health Organization, Port-au-Prince, Haiti. Caribbean Epidemiology Center Laboratory, Pan American Health Organization, Trinidad and Tobago. Div of Vaccines and Immunization, Pan American Health Organization, Washington, DC. Respiratory and Enteric Viruses Br, Div of Viral and Rickettsial Diseases, National Center for Infectious Diseases; Vaccine Preventable Disease Eradication Div, National Immunization Program, CDC.

*Recommendations for children in the United States include a 4-dose vaccination series with inactivated poliovirus vaccine (IPV) at ages 2, 4, 6–18 months, and 4–6 years. Unvaccinated adults should receive three doses of IPV, the first two doses at intervals of 4–8 weeks and the third dose 6–12 months after the second. If three doses cannot be administered within the recommended intervals before protection is needed, alternative schedules are proposed. For incompletely vaccinated persons, additional IPV doses are recommended to complete a series. Booster doses of IPV may be considered for persons who previously have completed a primary series of polio vaccination and who may be traveling to areas where polio is endemic.

*Public Health Dispatch — Continued**References*

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*Notice to Readers***International Course in Applied Epidemiology**

CDC and Emory University's Rollins School of Public Health will co-sponsor a course, "International Course in Applied Epidemiology" during September 24–October 19, 2001, in Atlanta, Georgia. This basic course in epidemiology is directed at public health professionals from countries other than the United States.

The course's content includes presentations and discussions of epidemiologic principles, basic statistical analysis, public health surveillance, field investigations, surveys and sampling, and discussions of the epidemiologic aspects of current major public health problems in international health. Included are small group discussions of epidemiologic case exercises based on field investigations. Participants are encouraged to give a short presentation reviewing some epidemiologic data from their own country. Computer training using Epi Info 2000 (Windows® version), a software program developed at CDC and the World Health Organization for epidemiologists, is included. Prerequisites are familiarity with the vocabulary and principles of basic epidemiology or completion of CDC's "Principles of Epidemiology" home-study course (SS3030) or equivalent. Preference will be given to applicants whose work involves priority public health problems in international health. Early registration deadline is June 1, 2001; late registration deadline is September 1, 2001. There is a tuition charge.

Additional information and applications are available from Emory University, Rollins School of Public Health, International Health Dept.(PIA), 1518 Clifton Road N.E., Room 746, Atlanta, GA 30322; telephone (404) 727-3485; fax (404) 727-4590; World-Wide Web site, http://www.sph.emory.edu/EPICOURSES*; or e-mail pvaleri@sph.emory.edu.

*References to sites of non-CDC organizations on the World-Wide Web are provided as a service to *MMWR* readers and do not constitute or imply endorsement of these organizations or their programs by CDC or the U.S. Department of Health and Human Services. CDC is not responsible for the content of pages found at these sites.

*Notices to Readers — Continued**Notice to Readers***Introduction to Public Health Surveillance Course**

CDC and Emory University's Rollins School of Public Health will co-sponsor a course, "Introduction to Public Health Surveillance" during June 18–22, 2001, in Atlanta, Georgia. The course is designed for state and local public health professionals.

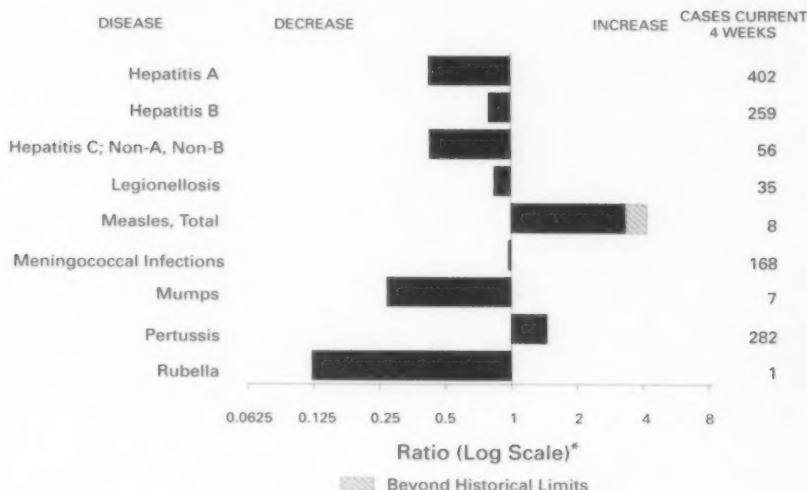
The course will provide practicing public health professionals with the theoretical and practical tools necessary to design, implement, and evaluate effective surveillance programs. Topics include overview and history of surveillance systems; planning considerations; sources and collection of data; analysis, interpretation, and communication of data; surveillance systems technology; ethics and legalities; state and local concerns; and future considerations. There is a tuition charge.

Deadline for application is May 4. Additional information and applications are available from Emory University, International Health Dept.(PIA), 1518 Clifton Road N.E., Room 746, Atlanta, GA 30322; telephone (404) 727-3485; fax (404) 727-4590; or World-Wide Web site, http://www.sph.emory.edu/EPICOURSES*; or e-mail pvaleri@sph.emory.edu.

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Erratum: Vol. 50, No. 7

In the article, "Prevalence of Disabilities and Associated Health Conditions Among Adults—United States, 1999," in the first full paragraph on page 121 in the sentence that begins "Of the total percentage of disabilities, 63% occurred among working adults," the age range should read "aged 18–64" years.

FIGURE 1. Selected notifiable disease reports, United States, comparison of provisional 4-week totals ending February 24, 2001, with historical data

* Ratio of current 4-week total to mean of 15 4-week totals (from previous, comparable, and subsequent 4-week periods for the past 5 years). The point where the hatched area begins is based on the mean and two standard deviations of these 4-week totals.

TABLE 1. Summary of provisional cases of selected notifiable diseases, United States, cumulative, week ending February 24, 2001 (8th Week)

	Cum. 2001		Cum. 2001
Anthrax	-	Poliomyelitis, paralytic	-
Brucellosis*	-	Psittacosis*	2
Cholera	-	Q fever*	1
Cyclosporiasis*	4	Rabies, human	-
Diphtheria	-	Rocky Mountain spotted fever (RMSF)	9
Ehrlichiosis: human granulocytic (HGE)*	3	Rubella, congenital syndrome	-
Encephalitis: human monocytic (HME)*	1	Streptococcal disease, invasive, group A	365
California serogroup viral*	-	Streptococcal toxic-shock syndrome*	13
eastern equine*	-	Syphilis, congenital†	1
St. Louis*	-	Tetanus	1
western equine*	-	Toxic-shock syndrome	14
Hansen disease (leprosy)†	2	Trichinosis	2
Hantavirus pulmonary syndrome**	1	Tularemia*	1
Hemolytic uremic syndrome, postdiarrheal*	5	Typhoid fever	15
HIV infection, pediatric**	10	Yellow fever	-
Plague	-		

- No reported cases.

* Not notifiable in all states.

† Updated weekly from reports to the Division of Viral and Rickettsial Diseases, National Center for Infectious Diseases (NCID).

‡ Updated monthly from reports to the Division of HIV/AIDS Prevention — Surveillance and Epidemiology, National Center for HIV, STD, and TB Prevention (NCHSTP). Last update January 30, 2001.

* Updated from reports to the Division of STD Prevention, NCHSTP.

TABLE II. Provisional cases of selected notifiable diseases, United States, weeks ending February 24, 2001, and February 26, 2000 (8th Week)

Reporting Area	AIDS		Chlamydia ¹		Cryptosporidiosis		Escherichia coli O157:H7 [*]			
	Cum. 2001 ¹	Cum. 2000	Cum. 2001	Cum. 2000	Cum. 2001	Cum. 2000	NETSS		PHLIS	
							Cum. 2001	Cum. 2000	Cum. 2001	Cum. 2000
UNITED STATES	2,792	4,895	77,539	95,997	132	156	115	193	56	162
NEW ENGLAND	91	497	2,976	3,510	5	7	13	15	7	18
Maine	3	3	-	209	-	1	-	1	-	1
N.H.	5	6	151	162	-	-	4	3	2	4
Vt.	5	96	98	-	2	4	-	1	-	2
Mass.	51	360	1,405	1,489	-	2	9	5	5	4
R.I.	11	17	471	370	1	-	-	-	-	-
Conn.	16	111	853	1,192	2	-	-	5	-	7
MID. ATLANTIC	555	1,283	3,613	7,556	9	15	9	23	6	38
Upstate N.Y.	4	80	N	N	3	8	9	21	6	31
N.Y. City	360	770	1,870	3,826	6	4	-	-	-	-
N.J.	157	300	308	2,020	-	-	-	1	-	2
Pa.	34	153	1,435	1,710	-	3	N	N	-	5
E.N. CENTRAL	224	545	9,867	17,380	43	36	23	31	11	8
Ohio	46	85	214	4,686	17	6	11	5	6	3
Ind.	26	28	1,898	1,975	9	3	4	1	-	1
Ill.	121	352	2,576	5,179	-	5	4	14	3	-
Mich.	23	67	4,051	3,027	17	3	2	6	-	2
Wis.	8	13	1,128	2,503	-	19	2	5	2	2
W.N. CENTRAL	44	96	3,847	5,562	4	4	14	39	9	32
Minn.	12	31	805	1,286	-	-	3	5	4	12
Iowa	9	7	442	403	2	-	2	8	-	4
Mo.	7	23	1,185	2,066	-	-	6	19	2	8
N. Dak.	-	-	109	159	-	1	-	2	-	2
S. Dak.	-	1	279	267	-	1	1	-	1	-
Neb.	6	4	201	475	2	2	-	2	-	4
Kans.	10	30	826	906	-	-	2	2	2	2
S. ATLANTIC	734	1,220	16,080	18,317	21	17	19	17	4	16
Del.	15	15	437	450	-	-	-	-	-	-
Md.	41	136	1,697	1,603	2	1	-	5	-	1
D.C.	62	24	446	448	2	-	-	-	U	U
Va.	48	75	2,176	1,971	2	-	2	3	3	5
W. Va.	6	5	321	308	-	-	-	1	-	1
N.C.	57	71	2,383	2,757	4	3	13	5	1	2
S.C.	61	107	1,260	2,726	-	-	1	-	-	-
Ga.	104	98	3,105	3,776	-	7	1	1	-	3
Fla.	340	689	4,255	4,278	11	6	2	2	-	4
E.S. CENTRAL	148	168	6,780	6,409	3	5	5	10	3	7
Ky.	18	36	1,324	1,177	-	-	-	4	2	2
Tenn.	80	35	2,232	1,816	-	-	2	3	1	5
Ala.	25	50	1,533	1,920	2	5	3	1	-	-
Miss.	25	47	1,691	1,496	1	-	-	2	-	-
W.S. CENTRAL	409	524	14,364	15,087	4	11	2	11	8	19
Ark.	19	20	1,387	605	2	1	-	2	-	3
La.	130	83	2,707	2,748	1	-	-	-	5	5
Okla.	20	17	1,599	1,393	1	1	2	3	2	3
Tex.	240	404	8,671	10,341	-	9	-	6	1	8
MOUNTAIN	145	178	3,631	5,438	14	11	12	23	5	7
Mont.	1	3	148	185	-	-	-	3	-	-
Idaho	-	3	292	296	2	1	2	3	-	-
Wyo.	-	1	117	129	-	-	-	2	-	-
Colo.	38	52	247	1,356	6	3	6	8	2	2
N. Mex.	7	25	604	709	3	1	-	-	-	-
Ariz.	52	22	1,718	1,816	1	2	4	3	2	2
Utah	11	28	67	344	2	3	-	1	1	1
Nev.	36	44	438	603	-	-	-	1	-	-
PACIFIC	442	384	16,381	16,738	29	50	18	24	3	17
Wash.	26	46	2,123	1,921	N	U	3	1	-	7
Oreg.	17	11	675	454	6	1	3	4	1	4
Calif.	398	303	12,862	13,480	23	49	12	15	-	3
Alaska	1	-	299	339	-	-	-	-	-	-
Hawaii	-	24	422	544	-	-	-	4	2	3
Guam	2	6	-	-	-	-	N	N	U	U
P.R.	48	116	436	U	-	-	-	-	U	U
V.I.	1	-	U	U	U	U	U	U	U	U
Amer. Samoa	-	-	U	U	U	U	U	U	U	U
C.N.M.I.	-	-	U	U	U	U	U	U	U	U

N: Not notifiable.

U: Unavailable.

-: No reported cases.

C.N.M.I.: Commonwealth of Northern Mariana Islands.

* Individual cases can be reported through both the National Electronic Telecommunications System for Surveillance (NETSS) and the Public Health Laboratory Information System (PHLIS).

¹ Chlamydia refers to genital infections caused by *C. trachomatis*. Totals reported to the Division of STD Prevention, NCHSTP.² Updated monthly from reports to the Division of HIV/AIDS Prevention—Surveillance and Epidemiology, National Center for HIV, STD, and TB Prevention. Last update January 30, 2001.

TABLE II. (Cont'd) Provisional cases of selected notifiable diseases, United States, weeks ending February 24, 2001, and February 26, 2000 (8th Week)

Reporting Area	Gonorrhea		Hepatitis C; Non-A, Non-B		Legionellosis		Listeriosis	Lyme Disease	
	Cum. 2001 ^a	Cum. 2000	Cum. 2001	Cum. 2000	Cum. 2001	Cum. 2000	Cum. 2001	Cum. 2001	Cum. 2000
UNITED STATES	37,055	49,703	186	532	73	96	30	252	547
NEW ENGLAND	855	1,057	2	2	1	7	5	84	96
Maine	-	10	-	-	-	2	-	-	-
N.H.	15	16	-	-	-	-	-	42	12
Vt.	14	4	2	-	1	-	-	-	-
Mass.	430	423	-	2	-	4	3	7	14
R.I.	123	87	-	-	-	-	-	-	-
Conn.	273	517	-	-	-	1	2	36	69
MID. ATLANTIC	2,351	3,865	10	78	2	11	1	90	356
Upstate N.Y.	594	443	7	1	1	3	1	66	65
N.Y. City	925	1,599	-	-	-	-	-	-	14
N.J.	207	1,119	-	72	-	-	-	-	47
Pa.	625	704	3	5	1	8	-	25	230
E.N. CENTRAL	5,084	10,333	26	50	26	36	5	9	14
Ohio	168	2,751	1	-	15	15	2	9	2
Ind.	871	911	-	-	3	4	-	-	-
Ill.	1,238	3,577	-	5	-	3	-	-	1
Mich.	2,380	1,964	25	46	8	7	3	-	-
Wis.	427	1,130	-	-	-	7	-	U	11
W.N. CENTRAL	1,715	2,268	37	73	7	4	2	5	8
Minn.	271	488	-	-	1	-	-	3	2
Iowa	130	111	-	-	2	1	-	-	-
Mo.	844	1,102	36	70	3	2	1	2	2
N. Dak.	4	6	-	-	-	-	-	-	-
S. Dak.	32	36	-	-	-	-	-	-	-
Nebr.	43	149	-	1	1	-	-	-	4
Kans.	391	376	1	2	1	-	1	-	-
S. ATLANTIC	10,411	14,300	6	9	13	20	6	49	61
Del.	251	239	-	-	-	1	-	-	8
Md.	1,016	1,093	2	2	5	7	1	44	46
D.C.	480	376	-	-	-	-	-	1	-
Va.	1,231	1,445	-	-	2	3	1	2	1
W. Va.	57	67	-	-	N	N	-	-	3
N.C.	1,968	1,901	2	5	2	1	-	2	4
S.C.	1,338	3,529	-	-	-	2	-	-	-
Ge.	1,626	2,502	-	-	-	-	1	-	-
Fla.	2,444	3,128	2	1	4	6	2	-	-
E.S. CENTRAL	4,514	4,753	23	79	3	2	4	2	-
Ky.	566	506	-	5	2	-	1	2	-
Tenn.	1,582	1,477	7	17	-	1	2	-	-
Ala.	1,275	1,583	-	3	1	1	1	-	-
Miss.	1,091	1,188	16	54	-	-	-	-	-
W.S. CENTRAL	7,435	8,071	53	173	1	4	-	-	2
Ark.	935	332	1	-	-	-	-	-	-
La.	1,894	2,130	5	97	1	2	-	-	2
Okla.	791	639	-	-	-	-	-	-	-
Tex.	3,815	4,970	47	76	-	2	-	-	-
MOUNTAIN	1,103	1,498	13	39	4	5	3	-	-
Mont.	5	-	-	-	-	-	-	-	-
Idaho	18	17	1	-	-	1	-	-	-
Wyo.	12	12	3	25	-	-	-	-	-
Colo.	318	537	4	6	3	2	1	-	-
N. Mex.	117	135	5	4	-	-	-	-	-
Ariz.	472	541	-	4	1	-	1	-	-
Utah	9	51	-	-	-	2	-	-	-
Nev.	152	205	-	-	-	-	-	-	-
PACIFIC	3,587	3,558	16	29	16	7	13	13	11
Wash.	485	369	2	2	3	2	-	-	-
Oreg.	135	56	3	8	N	N	1	2	1
Calif.	2,862	3,031	11	19	13	5	12	11	10
Alaska	33	34	-	-	-	-	-	-	-
Hawaii	72	68	-	-	-	-	-	N	N
Guam	-	-	-	-	-	-	-	-	-
P.R.	126	76	-	1	2	-	-	N	N
V.I.	U	U	U	U	U	U	-	U	U
Amer. Samoa	U	U	U	U	U	U	-	U	U
C.N.M.I.	U	U	U	U	U	U	-	U	U

N: Not notifiable.

U: Unavailable.

-: No reported cases.

TABLE II. (Cont'd) Provisional cases of selected notifiable diseases, United States, weeks ending February 24, 2001, and February 26, 2000 (8th Week)

Reporting Area	Malaria		Rabies, Animal		Salmonellosis*			
	Cum. 2001	Cum. 2000	Cum. 2001	Cum. 2000	NETSS		PHLIS	
					Cum. 2001	Cum. 2000	Cum. 2001	Cum. 2000
UNITED STATES	106	127	492	622	2,394	3,410	1,646	3,193
NEW ENGLAND	10	3	66	64	198	205	141	225
Maine	-	-	11	14	9	17	7	10
N.H.	-	-	2	1	16	12	10	12
Vt.	-	-	13	4	10	5	9	5
Mass.	3	3	16	23	121	133	64	138
R.I.	-	-	8	4	11	3	18	14
Conn.	7	-	16	18	31	36	33	46
MID. ATLANTIC	6	23	84	106	160	482	221	557
Upstate N.Y.	4	7	66	80	58	58	64	130
N.Y. City	2	10	1	1	77	141	96	166
N.J.	-	3	17	13	-	175	27	98
Pa.	-	3	-	13	25	107	34	163
E. N. CENTRAL	22	16	3	5	391	526	301	263
Ohio	4	2	-	1	153	139	74	90
Ind.	7	-	1	-	31	36	19	56
Ill.	-	9	-	-	88	183	100	1
Mich.	11	5	2	-	82	74	77	78
Wis.	-	-	-	4	37	94	31	39
W. N. CENTRAL	3	7	44	62	159	155	135	184
Minn.	1	2	11	18	31	27	53	62
Iowa	1	-	11	6	23	12	1	13
Mo.	1	1	2	2	53	54	59	48
N. Dak.	-	-	8	8	1	2	2	13
S. Dak.	-	-	6	16	13	6	-	12
Nebr.	-	1	-	9	9	20	-	14
Kans.	-	3	6	12	29	34	13	21
S. ATLANTIC	26	30	213	202	660	514	366	512
Del.	1	-	-	7	12	8	8	11
Md.	11	17	43	42	80	97	78	89
D.C.	2	-	-	-	13	-	U	U
Va.	8	7	43	56	76	48	48	63
W. Va.	-	-	15	15	3	17	11	11
N.C.	1	4	56	57	152	115	46	80
S.C.	-	-	7	13	56	56	50	47
Ga.	-	-	24	-	106	56	126	159
Fla.	3	2	25	13	152	119	-	52
E. S. CENTRAL	5	4	4	25	182	178	63	126
Ky.	-	1	2	5	36	29	21	19
Tenn.	3	-	2	17	41	42	39	59
Ala.	2	3	-	3	83	63	-	40
Miss.	-	-	-	-	22	44	3	8
W. S. CENTRAL	2	1	10	105	74	310	139	369
Ark.	-	-	-	-	30	28	13	22
La.	1	1	-	-	9	38	40	61
Okla.	-	-	10	8	14	22	15	26
Tex.	1	-	-	97	21	222	71	260
MOUNTAIN	8	8	27	27	200	296	128	250
Mont.	1	-	4	9	7	11	-	13
Idaho	1	-	-	6	21	4	4	13
Wyo.	-	-	9	13	7	5	1	3
Colo.	3	4	-	-	53	69	34	59
N. Mex.	1	-	1	1	28	28	10	30
Ariz.	1	2	13	4	67	89	59	96
Utah	1	2	-	-	21	46	20	49
Nev.	-	-	-	-	11	28	-	-
PACIFIC	24	35	41	26	370	744	152	707
Wash.	1	2	-	-	18	23	-	88
Oreg.	4	5	-	-	36	46	31	56
Calif.	18	27	24	21	313	625	86	520
Alaska	1	-	17	5	4	11	-	10
Hawaii	-	1	-	-	-	40	36	33
Guam	-	-	-	-	-	-	U	U
P.R.	-	2	11	7	5	36	U	U
V.I.	U	U	U	U	U	U	U	U
Amer. Samoa	U	U	U	U	U	U	U	U
C.N.M.I.	U	U	U	U	U	U	U	U

N: Not notifiable. U: Unavailable. -: No reported cases.

* Individual cases can be reported through both the National Electronic Telecommunications System for Surveillance (NETSS) and the Public Health Laboratory Information System (PHLIS).

TABLE II. (Cont'd) Provisional cases of selected notifiable diseases, United States, weeks ending February 24, 2001, and February 26, 2000 (8th Week)

Reporting Area	Shigellosis*				Syphilis (Primary & Secondary)		Tuberculosis	
	NETSS		PHUS		Cum. 2001	Cum. 2000	Cum. 2001	Cum. 2000
	Cum. 2001	Cum. 2000	Cum. 2001	Cum. 2000				
UNITED STATES	1,175	2,043	561	1,181	584	910	688	1,294
NEW ENGLAND	20	55	15	40	6	9	40	37
Maine	-	2	-	-	-	-	-	1
N.H.	-	1	-	1	-	-	1	-
Vt.	-	1	-	-	-	-	-	-
Mass.	16	42	9	29	4	7	25	21
R.I.	-	3	-	6	-	1	3	2
Conn.	4	6	6	7	2	1	11	12
MID. ATLANTIC	93	120	65	123	32	37	159	174
Upstate N.Y.	56	19	2	21	3	1	20	12
N.Y. City	29	49	39	47	20	20	56	108
N.J.	-	37	8	26	6	7	57	47
Pa.	8	15	16	29	3	9	26	7
E. N. CENTRAL	216	358	104	123	60	182	98	113
Ohio	70	18	20	8	5	12	17	19
Ind.	37	22	5	9	17	64	10	3
Ill.	53	146	48	2	11	71	57	83
Mich.	52	140	29	101	25	23	-	3
Wis.	4	32	2	3	2	12	14	5
W. N. CENTRAL	180	102	127	85	5	20	39	48
Minn.	66	21	85	40	4	3	25	23
Iowa	25	15	-	16	-	5	-	3
Mo.	48	52	34	20	1	10	8	17
N. Dak.	8	-	1	-	-	-	-	-
S. Dak.	2	1	-	-	-	-	-	2
Nebr.	9	8	-	6	-	1	5	1
Kans.	22	5	7	3	-	-	-	2
S. ATLANTIC	176	158	53	70	228	277	112	202
Del.	2	-	-	1	-	1	-	-
Md.	17	16	3	5	31	53	11	16
D.C.	8	-	U	U	4	11	9	-
Va.	12	10	5	12	15	20	13	5
W. Va.	2	1	5	1	-	1	5	5
N.C.	51	12	19	5	63	78	10	17
S.C.	12	3	7	1	31	23	8	18
Ga.	7	6	13	24	21	36	48	44
Fla.	66	110	1	21	62	52	8	97
E. S. CENTRAL	105	96	31	70	87	126	50	84
Ky.	47	19	13	13	7	7	3	5
Tenn.	13	43	15	51	43	88	-	21
Ala.	26	5	-	4	21	18	36	39
Miss.	19	29	3	2	16	13	11	19
W. S. CENTRAL	66	356	97	373	98	146	19	258
Ark.	31	33	10	3	10	9	15	8
La.	8	50	25	20	18	36	-	6
Okla.	1	5	-	4	12	37	4	7
Tex.	26	268	62	346	58	64	-	237
MOUNTAIN	107	179	52	65	25	28	21	58
Mont.	-	-	-	-	-	-	-	-
Idaho	4	21	-	15	-	-	-	-
Wyo.	-	1	-	1	-	-	-	-
Colo.	20	31	12	13	1	1	9	8
N. Mex.	23	18	7	13	1	2	1	7
Ariz.	52	65	28	19	19	23	10	15
Utah	3	5	5	5	4	-	1	4
Nev.	5	38	-	-	1	2	-	24
PACIFIC	212	619	17	228	42	85	150	320
Wash.	25	126	-	178	13	8	25	24
Oreg.	17	72	15	44	2	1	-	1
Calif.	170	412	-	-	25	76	119	281
Alaska	-	2	-	1	-	-	6	3
Hawaii	-	7	2	5	2	-	-	11
Guam	-	-	U	U	-	-	-	-
P.R.	-	7	U	U	32	29	-	17
VI.	U	U	U	U	U	U	U	U
Amer. Samoa	U	U	U	U	U	U	U	U
C.N.M.I.	U	U	U	U	U	U	U	U

N: Not notifiable. U: Unavailable. -: No reported cases.

*Individual cases can be reported through both the National Electronic Telecommunications System for Surveillance (NETSS) and the Public Health Laboratory Information System (PHLIS).

TABLE III. Provisional cases of selected notifiable diseases preventable by vaccination, United States, weeks ending February 24, 2001, and February 26, 2000 (8th Week)

Reporting Area	<i>H. influenzae</i> , Invasive		Hepatitis (Viral), By Type				Measles (Rubeola)					
	Cum. 2001*	Cum. 2000	A		B		Indigenous		Imported*		Total	
			Cum. 2001	Cum. 2000	Cum. 2001	Cum. 2000	2001	Cum. 2001	2001	Cum. 2001	Cum. 2001	Cum. 2000
UNITED STATES	176	190	980	1,948	552	827	-	8	2	5	13	10
NEW ENGLAND	8	18	50	46	9	15	-	3	-	1	4	-
Maine	-	-	1	1	1	1	-	-	-	-	-	-
N.H.	-	2	3	6	2	3	-	-	-	-	-	-
Vt.	-	2	1	1	1	2	-	1	-	-	1	-
Mass.	8	14	11	17	1	1	-	2	-	1	3	-
R.I.	-	-	3	-	4	-	-	-	-	-	-	-
Conn.	-	-	31	21	-	8	-	-	-	-	-	-
MID. ATLANTIC	17	28	41	110	44	133	-	-	-	-	-	3
Upstate N.Y.	6	12	16	32	9	7	-	-	-	-	-	-
N.Y. City	6	9	22	60	27	75	-	-	-	-	-	3
N.J.	4	5	-	5	-	7	-	-	-	-	-	-
Pa.	1	2	3	13	8	44	-	-	-	-	-	-
E. N. CENTRAL	22	27	135	298	84	87	-	-	2	2	2	3
Ohio	16	9	40	61	17	17	-	-	-	-	-	2
Ind.	5	-	4	5	2	1	-	-	-	-	-	-
Ill.	-	13	24	128	2	2	-	-	2	2	2	-
Mich.	1	3	67	92	63	66	-	-	-	-	-	1
Wis.	-	-	-	12	-	1	-	-	-	-	-	-
W. N. CENTRAL	2	4	71	178	34	53	-	1	-	-	1	-
Minn.	-	-	1	18	1	-	-	-	-	-	-	-
Iowa	-	-	6	17	3	9	-	-	-	-	-	-
Mo.	2	3	17	116	24	37	-	-	-	-	-	-
N. Dak.	-	1	-	-	-	-	-	-	-	-	-	-
S. Dak.	-	-	-	-	1	-	-	-	-	-	-	-
Nebr.	-	-	17	4	4	4	-	-	-	-	-	-
Kans.	-	-	30	23	1	3	-	1	-	-	1	-
S. ATLANTIC	67	42	135	161	87	123	-	2	-	1	3	-
Del.	-	-	-	-	-	-	-	-	-	-	-	-
Md.	15	20	47	25	16	25	-	2	-	1	3	-
D.C.	-	-	3	-	-	-	-	-	-	-	-	-
Va.	5	10	20	28	11	21	-	-	-	-	-	-
W. Va.	3	1	-	19	1	-	-	-	-	-	-	-
N. Va.	14	3	10	45	29	55	-	-	-	-	-	-
S.C.	1	1	9	3	-	1	-	-	-	-	-	-
Ga.	10	6	1	14	1	2	-	-	-	-	-	-
Fla.	19	1	45	27	27	19	-	-	-	-	-	-
E. S. CENTRAL	9	10	40	84	54	65	-	-	-	-	-	-
Ky.	-	7	6	4	3	8	-	-	-	-	-	-
Tenn.	5	3	20	23	23	30	-	-	-	-	-	-
Ala.	4	-	14	15	20	5	-	-	-	-	-	-
Miss.	-	-	42	8	22	5	U	-	U	-	-	-
W. S. CENTRAL	2	15	127	381	30	86	-	-	-	-	-	-
Ark.	-	-	16	27	14	10	-	-	-	-	-	-
La.	-	6	10	18	4	29	-	-	-	-	-	-
Okla.	2	9	26	56	11	8	-	-	-	-	-	-
Tex.	-	-	75	281	1	39	-	-	-	-	-	-
MOUNTAIN	40	25	152	123	67	63	-	-	-	1	1	-
Mont.	-	-	2	1	-	2	-	-	-	-	-	-
Idaho	1	1	17	5	2	3	-	-	-	1	1	-
Wyo.	-	-	1	-	-	-	-	-	-	-	-	-
Colo.	8	7	23	33	17	16	-	-	-	-	-	-
N. Mex.	7	9	5	16	16	18	-	-	-	-	-	-
Ariz.	23	6	75	48	25	19	-	-	-	-	-	-
Utah	-	1	10	10	-	3	-	-	-	-	-	-
Nev.	1	1	19	8	7	2	-	-	-	-	-	-
PACIFIC	9	21	229	567	143	202	-	2	-	-	2	4
Wash.	-	2	7	19	11	6	-	-	-	-	-	2
Oreg.	8	4	20	39	17	17	-	2	-	-	2	-
Calif.	-	5	194	502	114	175	-	-	-	-	-	2
Alaska	1	1	8	3	1	2	-	-	-	-	-	-
Hawaii	-	9	-	4	-	2	-	-	-	-	-	-
Guam	-	-	-	-	-	-	U	-	U	-	-	-
P.R.	-	-	-	53	3	26	-	-	-	-	-	-
V.I.	U	U	U	U	U	U	U	U	U	U	U	U
Amer. Samoa	U	U	U	U	U	U	U	U	U	U	U	U
C.N.M.I.	U	U	U	U	U	U	U	U	U	U	U	U

N: Not notifiable. U: Unavailable. -: No reported cases.

*For imported measles, cases include only those resulting from importation from other countries.

† Of 32 cases among children aged <5 years, serotype was reported for 10 and of those, 1 was type b.

TABLE III. (Cont'd) Provisional cases of selected notifiable diseases preventable by vaccination, United States, weeks ending February 24, 2001, and February 26, 2000 (8th Week)

Reporting Area	Meningococcal Disease		Mumps			Pertussis			Rubella		
	Cum. 2001	Cum. 2000	2001	Cum. 2001	Cum. 2000	2001	Cum. 2001	Cum. 2000	2001	Cum. 2001	Cum. 2000
UNITED STATES	386	430	3	16	73	77	656	760	-	2	7
NEW ENGLAND	36	23	-	-	-	7	148	207	-	-	4
Maine	-	2	-	-	-	-	-	7	-	-	-
N.H.	4	2	-	-	-	5	11	29	-	-	1
Vt.	2	1	-	-	-	-	16	41	-	-	-
Mass.	20	13	-	-	-	-	117	127	-	-	3
R.I.	-	1	-	-	-	-	-	2	-	-	-
Conn.	10	4	-	-	-	2	4	1	-	-	-
MID. ATLANTIC	34	33	-	-	4	9	21	54	-	-	2
Upstate N.Y.	11	7	-	-	-	9	21	25	-	-	-
N.Y. City	8	10	-	-	1	-	-	19	-	-	2
N.J.	14	8	-	-	-	-	-	-	-	-	-
Pa.	1	8	-	-	2	-	-	10	-	-	-
E.N. CENTRAL	26	72	1	2	8	15	85	146	-	2	-
Ohio	16	11	-	1	4	12	70	102	-	-	-
Ind.	-	7	-	-	-	-	1	3	-	-	-
Ill.	-	24	1	1	1	3	3	7	-	1	-
Mich.	10	20	-	-	3	-	10	5	-	1	-
Wis.	-	10	-	-	-	-	1	29	-	-	-
W.N. CENTRAL	30	31	1	3	5	1	26	19	-	-	-
Minn.	-	1	-	-	-	-	-	6	-	-	-
Iowa	11	7	-	-	3	-	2	6	-	-	-
Mo.	10	18	-	-	1	-	13	2	-	-	-
N. Dak.	-	1	-	-	-	-	-	-	-	-	-
S. Dak.	1	2	-	-	-	-	2	1	-	-	-
Nebr.	3	1	-	-	1	-	-	-	-	-	-
Kans.	5	1	1	3	-	1	9	4	-	-	-
S. ATLANTIC	80	62	-	1	8	1	25	41	-	-	-
Del.	-	-	-	-	-	-	-	-	-	-	-
Md.	15	4	-	1	1	1	11	14	-	-	-
D.C.	-	-	-	-	-	-	-	-	-	-	-
Va.	10	11	-	-	1	-	-	-	-	-	-
W. Va.	-	1	-	-	-	-	-	-	-	-	-
N.C.	20	11	-	-	2	-	10	15	-	-	-
S.C.	5	6	-	-	3	-	4	9	-	-	-
Ga.	9	11	-	-	-	-	-	-	-	-	-
Fla.	21	18	-	-	1	-	-	2	-	-	-
E. S. CENTRAL	31	21	-	-	1	6	22	25	-	-	-
Ky.	4	4	-	-	-	3	4	18	-	-	-
Tenn.	11	9	-	-	-	3	16	2	-	-	-
Ala.	13	7	-	-	1	-	2	4	-	-	-
Miss.	3	1	U	-	-	U	-	1	U	-	-
W. S. CENTRAL	39	58	-	-	10	-	3	6	-	-	1
Ark.	6	1	-	-	-	-	2	3	-	-	-
La.	14	17	-	-	2	-	-	1	-	-	-
Okla.	6	6	-	-	-	-	1	-	-	-	-
Tex.	13	34	-	-	8	-	-	2	-	-	1
MOUNTAIN	25	20	1	3	3	37	315	150	-	-	-
Mont.	-	-	-	-	-	-	-	1	-	-	-
Idaho	3	2	-	-	-	4	49	23	-	-	-
Wyo.	-	-	-	1	-	-	-	-	-	-	-
Colo.	11	5	-	-	-	5	91	91	-	-	-
N. Mex.	4	3	1	2	N	2	10	20	-	-	-
Ariz.	3	6	-	-	-	26	161	9	-	-	-
Utah	2	3	-	-	-	-	4	4	-	-	-
Nev.	2	1	-	-	2	-	-	2	-	-	-
PACIFIC	95	110	-	7	34	1	11	112	-	-	-
Wash.	13	5	-	-	-	1	8	13	-	-	-
Oreg.	14	13	N	N	N	-	3	13	-	-	-
Calif.	58	88	-	7	32	-	-	79	-	-	-
Alaska	-	1	-	-	-	-	-	2	-	-	-
Hawaii	-	3	-	-	2	-	-	5	-	-	-
Guam	-	-	U	-	-	U	-	-	U	-	-
P.R.	1	2	-	-	-	-	-	-	-	-	-
V.I.	U	U	U	U	U	U	U	U	U	U	U
Amer. Samoa	U	U	U	U	U	U	U	U	U	U	U
C.N.M.I.	U	U	U	U	U	U	U	U	U	U	U

N: Not notifiable.

U: Unavailable.

-: No reported cases.

TABLE IV. Deaths in 122 U.S. cities,* week ending
February 24, 2001 (8th Week)

Reporting Area	All Causes, By Age (Years)						P&I [†] Total	Reporting Area	All Causes, By Age (Years)						P&I [†] Total	
	All Ages	65	45-64	25-44	1-24	<1			All Ages	65	45-64	25-44	1-24	<1		
NEW ENGLAND	562	414	97	32	10	9	58	S. ATLANTIC	1,274	874	243	109	28	19	96	
Boston, Mass.	169	119	33	11	3	3	23	Atlanta, Ga.	179	111	44	15	6	3	4	
Bridgeport, Conn.	48	40	5	3	-	-	5	Baltimore, Md.	172	118	26	23	2	2	20	
Cambridge, Mass.	14	12	2	-	-	-	-	Charlotte, N.C.	131	86	30	11	2	2	18	
Fall River, Mass.	33	28	4	1	-	-	4	Jacksonville, Fla.	131	91	24	10	3	3	12	
Hartford, Conn.	38	26	8	4	-	-	4	Miami, Fla.	89	63	14	11	1	-	12	
Lowell, Mass.	34	29	4	1	-	-	2	Norfolk, Va.	71	47	13	6	3	2	1	
Lynn, Mass.	14	12	2	-	-	-	-	Richmond, Va.	61	37	17	4	2	1	6	
New Bedford, Mass.	32	23	8	1	-	-	3	Savannah, Ga.	46	36	6	2	2	-	3	
New Haven, Conn.	38	21	9	4	2	2	6	St. Petersburg, Fla.	58	48	4	3	2	1	4	
Providence, R.I.	U	U	U	U	U	U	U	Tampa, Fla.	210	139	49	17	2	3	17	
Somerville, Mass.	6	5	-	1	-	-	1	Washington, D.C.	101	73	16	7	3	2	1	
Springfield, Mass.	41	29	9	-	2	1	3	Wilmington, Del.	25	25	-	-	-	-	-	
Waterbury, Conn.	36	27	4	2	2	1	4	E.S. CENTRAL	880	578	182	79	16	24	70	
Worcester, Mass.	59	43	9	4	1	2	6	Birmingham, Ala.	156	104	30	10	3	8	15	
MID. ATLANTIC	2,348	1,650	460	167	36	34	145	Chattanooga, Tenn.	80	54	18	6	1	1	6	
Albany, N.Y.	39	26	7	6	-	-	4	Knoxville, Tenn.	71	47	11	11	-	2	6	
Allentown, Pa.	17	15	2	-	-	-	-	Lexington, Ky.	53	33	9	7	1	3	2	
Buffalo, N.Y.	119	91	15	7	4	2	15	Memphis, Tenn.	205	136	45	20	2	2	12	
Camden, N.J.	30	15	8	-	4	3	-	Mobile, Ala.	102	68	21	8	3	4	5	
Elizabeth, N.J.	23	15	5	3	-	-	-	Montgomery, Ala.	64	38	14	9	2	1	8	
Erie, Pa.	36	32	2	2	-	-	1	Nashville, Tenn.	149	100	34	8	4	3	16	
Jersey City, N.J.	49	41	6	2	-	-	-	W.S. CENTRAL	1,607	1,063	318	129	56	41	110	
New York City, N.Y.	1,216	843	249	92	17	14	65	Austin, Tex.	93	61	17	12	1	2	7	
Newark, N.J.	73	38	15	15	1	3	5	Baton Rouge, La.	87	53	22	7	3	2	3	
Paterson, N.J.	24	11	11	1	1	-	1	Corpus Christi, Tex.	66	48	13	4	1	-	1	
Philadelphia, Pa.	294	191	69	23	6	5	20	Dallas, Tex.	265	177	40	27	10	11	20	
Pittsburgh, Pa.	87	60	24	2	-	1	5	El Paso, Tex.	75	49	16	7	2	1	5	
Reading, Pa.	25	20	3	1	-	1	4	Ft. Worth, Tex.	118	82	18	7	3	8	5	
Rochester, N.Y.	136	107	19	8	1	1	9	Houston, Tex.	360	205	82	44	24	5	31	
Schenectady, N.Y.	23	18	5	-	-	-	1	Little Rock, Ark.	64	43	14	2	3	2	2	
Scranton, Pa.	25	21	2	1	-	1	2	New Orleans, La.	U	U	U	U	U	U	U	
Syracuse, N.Y.	69	54	8	4	1	2	7	San Antonio, Tex.	251	176	50	16	4	5	16	
Trenton, N.J.	31	24	6	-	-	1	3	Shreveport, La.	122	94	20	2	3	3	12	
Utica, N.Y.	32	28	4	-	-	-	3	Tulsa, Okla.	106	75	26	1	2	2	8	
Yonkers, N.Y.	U	U	U	U	U	U	U	MOUNTAIN	1,045	724	192	82	22	25	82	
E.N. CENTRAL	1,777	1,257	328	116	36	41	119	Albuquerque, N.M.	109	76	21	10	2	-	8	
Akron, Ohio	58	47	6	3	-	2	6	Boise, Idaho	40	32	5	1	1	1	4	
Canton, Ohio	41	33	5	-	1	2	4	Colorado Springs, Colo.	52	34	7	9	-	2	3	
Chicago, Ill.	U	U	U	U	U	U	U	Denver, Colo.	121	76	27	11	3	4	9	
Cincinnati, Ohio	110	80	19	4	1	6	10	Las Vegas, Nev.	206	147	35	14	5	5	10	
Cleveland, Ohio	123	85	24	8	4	2	4	Ogden, Utah	30	22	4	2	-	2	-	
Columbus, Ohio	220	156	36	14	10	5	12	Phoenix, Ariz.	159	109	24	16	6	4	17	
Dayton, Ohio	126	92	25	6	1	2	10	Pueblo, Colo.	42	31	7	4	-	-	5	
Detroit, Mich.	224	115	70	25	11	3	16	Salt Lake City, Utah	120	79	29	7	1	4	15	
Evansville, Ind.	54	41	9	3	-	2	2	Tucson, Ariz.	166	118	33	8	4	3	11	
Fort Wayne, Ind.	53	38	13	1	-	1	4	PACIFIC	1,529	1,130	276	88	35	16	160	
Gary, Ind.	17	13	2	-	2	-	-	Berkeley, Calif.	25	18	4	3	-	-	2	
Grand Rapids, Mich.	34	27	2	3	1	1	5	Fresno, Calif.	141	112	23	5	1	-	10	
Indianapolis, Ind.	182	135	30	14	1	2	4	Glendale, Calif.	11	7	2	2	-	-	-	
Lansing, Mich.	40	33	6	1	-	-	4	Honolulu, Hawaii	74	60	10	2	2	-	5	
Milwaukee, Wis.	162	118	28	11	1	4	15	Long Beach, Calif.	100	73	21	3	2	1	16	
Peoria, Ill.	55	43	6	3	-	1	5	Los Angeles, Calif.	349	246	68	23	9	3	27	
Rockford, Ill.	64	46	11	4	1	2	1	Pasadena, Calif.	24	16	3	3	2	-	4	
South Bend, Ind.	64	45	12	6	-	1	4	Portland, Oreg.	U	U	U	U	U	U	U	
Toledo, Ohio	111	79	20	9	1	2	6	Sacramento, Calif.	172	133	26	10	2	1	21	
Youngstown, Ohio	39	31	6	1	-	-	1	San Diego, Calif.	174	133	31	2	6	2	25	
W.N. CENTRAL	673	482	122	38	9	22	61	San Francisco, Calif.	U	U	U	U	U	U	U	
Des Moines, Iowa	83	57	19	3	1	3	8	San Jose, Calif.	161	118	30	7	4	2	15	
Duluth, Minn.	28	24	3	1	-	-	6	Santa Cruz, Calif.	27	19	5	2	-	1	2	
Kansas City, Kans.	39	30	8	1	-	-	4	Seattle, Wash.	113	75	24	4	4	6	15	
Kansas City, Mo.	U	U	U	U	U	U	U	Spokane, Wash.	56	46	9	-	1	-	5	
Lincoln, Nebr.	61	48	8	3	2	-	6	Tacoma, Wash.	102	74	20	3	2	-	13	
Minneapolis, Minn.	120	91	20	3	1	5	13	TOTAL	11,695 [‡]	8,172	2,218	821	246	231	903	
Omaha, Nebr.	98	68	17	6	-	7	5									
St. Louis, Mo.	70	43	12	11	2	2	6									
St. Paul, Minn.	90	65	15	6	1	3	8									
Wichita, Kans.	94	56	20	4	2	2	5									

U: Unavailable. -: No reported cases.

*Mortality data in this table are voluntarily reported from 122 cities in the United States, most of which have populations of $\geq 100,000$. A death is reported by the place of its occurrence and by the week that the death certificate was filed. Fetal deaths are not included.

[†]Pneumonia and influenza.

[‡]Because of changes in reporting methods in this Pennsylvania city, these numbers are partial counts for the current week. Complete counts will be available in 4 to 6 weeks.

*Total includes unknown ages.

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